CMOS / 3.3V / 7.0×5.0mm

Pb Free RoHS Conforming

Features

- Miniature ceramic package
- Highly reliable with seam welding
- CMOS output
- Supply voltage V_{DD}=3.3V
- Internal Bypass Capacitor
- Low Jitter
- ±25ppm available

Table 1

Stability		Topr (°C)	Note
Code	(ppm)		
0	± 50	−10 to +70 (Standard)	Standard specifications
S	± 30		With only certain frequencies
U	± 25		
F	±100	−40 to +85 (Extend)	With only certain frequencies
G	± 50		

How to Order

K50H-3C ① 0 - ② S ③ E ④ 125.000 ⑤

①Type(7×5 SMD, 3.3V)
②Frequency Stability Code(See Table1)
③Duty Ratio(S: 45% to 55% STD)
④Enable/Disable Function(STD)
⑤Oscillation Frequency(Ex.: 125.000MHz)

Packaging(Tape & Reel 1,000pcs/reel)

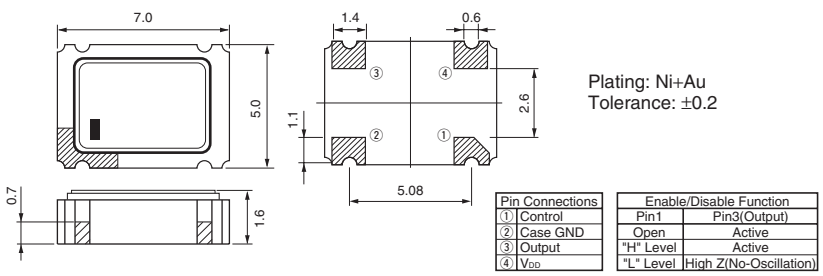
Specifications

Item	Symbol	Conditions		Min.	Max.	Units
Output Frequency Range	F_{OUT}			50	170	MHz
Frequency Stability	F_{SBY}	Overall conditions: initial tolerance, operating temperature range, rated power supply voltage change, load change, aging(1year @25°C), shock and vibration		−25	+25	ppm
				−30	+30	
				−50	+50	
Storage Temperature Range	T_{STG}			−55	+125	°C
Operating Temperature Range	T_{OPR}	Standard		−10	+70	
		Extend(option)		−40	+85	
Max. Supply Voltage	—			−0.5	7.0	Volt
Supply Voltage	V_{DD}	Stability: ±50ppm, ±100ppm(Ext Temp)		2.97	3.63	
		Stability: ±25ppm, ±30ppm, ±50ppm(Ext Temp)		3.14	3.46	
Current Consumption (Maximum Loaded)	I_{DD}	50≤F_{OUT}≤ 85MHz		—	30	mA
		85<F_{OUT}≤100MHz		—	40	
		100<F_{OUT}≤135MHz		—	50	
		135<F_{OUT}≤160MHz		—	60	
Duty Ratio(Symmetry)	I_{ST}	Standby Function		—	10	µA
Duty Ratio(Symmetry)	SYM	@50% V_{DD}		45	55	%
Rise/Fall Time (10% V_{DD} to 90% V_{DD} Maximum Loaded)	Tr/Tf	50≤F_{OUT}<100MHz	20% V_{DD} to 80% V_{DD}	—	3.5	nS
			10% V_{DD} to 90% V_{DD}	—	5.0	
		100≤F_{OUT}≤160MHz	20% V_{DD} to 80% V_{DD}	—	1.5	
			10% V_{DD} to 90% V_{DD}	—	2.0	
Output Voltage-"L"	V_{OL}			—	10% V_{DD}	Volt
Output Voltage-"H"	V_{OH}			90% V_{DD}	—	
Output Load	CL	CMOS		—	15	pF
Input Voltage Range	V_{IN}			0	V_{DD}	Volt
Input Voltage-"L"	V_{IL}			—	30% V_{DD}	Volt
Input Voltage-"H"	V_{IH}			70% V_{DD}	—	
Output Disable Time	—			—	5	mS
Output Enable Time	—			—	150	nS
Start-up Time	ST	@Minimum operating Voltage to be 0sec.		—	10	mS
Deterministic Jitter pk-pk	DJ	Measured with "Wavecrest DTS-2079", *VISI 6.3.1*		—	2	psec
1Sigma jitter	1sigma			—	4	

Note: Please contact us for inquires about extended operating temperature range, available frequencies and other conditions.
All electrical characteristics are defined at the maximum load and operating temperature range.

Dimensions

(Unit : mm)

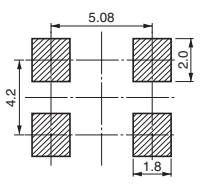


Pin Connections	
①	Control
②	Case GND
③	Output
④	V_{DD}

Enable/Disable Function	
Pin1	Pin3(Output)
Open	Active
"H" Level	Active
"L" Level	High Z(No-Oscillation)

Recommended Land Pattern

(Unit : mm)

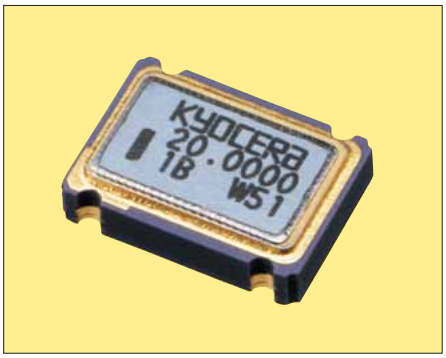


Note: K50H Series has Bypass Capacitor of 0.01µF between V_{DD} and GND.

KYOCERA

Clock Crystal Oscillators
Surface Mount Type
K50-3C Series

CMOS / 3.3V / 7.0×5.0mm



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Features

- Miniature ceramic package
- Highly reliable with seam welding
- CMOS output
- Supply voltage V_{DD}=3.3V
- ±25ppm available

Table 1

Stability Code	Stability (ppm)	T_{OPR} (°C)	Note
0	± 50	−10 to +70 (Standard)	Standard specifications
S	± 30		With only certain frequencies
U	± 25		
F	±100	−40 to +85 (Extend)	With only certain frequencies
G	± 50		

How to Order

K50-3C ① 0 ② - S ③ E ④ 25.0000 ⑤

①Type(7×5 SMD, 3.3V)
②Frequency Stability Code(See Table1)
③Duty Ratio(S: 45% to 55% STD)
④Enable/Disable Function(STD)
⑤Oscillation Frequency(Ex.: 25.0000MHz)

Packaging(Tape & Reel 1Kpcs/reel)

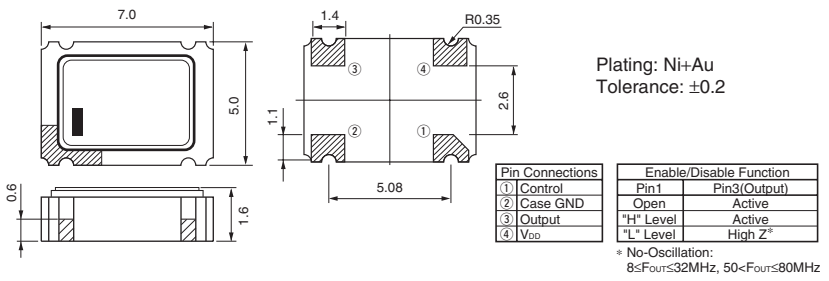
Specifications

Item	Symbol	Conditions	Min.	Max.	Units
Output Frequency Range	F_{OUT}		1.5	80	MHz
Frequency Stability	F_{SBY}	Overall conditions: initial tolerance, operating temperature range, rated power supply voltage change, load change, aging(1year @25°C), shock and vibration	−25	+25	ppm
			−30	+30	
			−50	+50	
Storage Temperature Range	T_{STG}		−55	+125	°C
Operating Temperature Range	T_{OPR}	Standard	−10	+70	
		Extend(option)	−40	+85	
Max. Supply Voltage	—		−0.5	7.0	Volt
Supply Voltage	V_{DD}	Stability: ±50ppm, ±30ppm, ±100ppm(Ext Temp)	2.97	3.63	
		Stability: ±25ppm, ±50ppm(Ext Temp)	3.14	3.46	
Current Consumption (Maximum Loaded)	I_{DD}	1.5≤F_{OUT}≤20MHz	—	10	mA
		20<F_{OUT}≤40MHz	—	15	
		40<F_{OUT}≤60MHz	—	20	
		60<F_{OUT}≤80MHz	—	30	
Standby/Disable Current	I_{ST}/I_{DE}	8≤F_{OUT}≤32MHz(Standby Function)	—	10	µA
		32<F_{OUT}≤50MHz(Disable Function)	—	15	mA
		50<F_{OUT}≤80MHz(Standby Function)	—	10	µA
Duty Ratio(Symmetry)	SYM	@50% V_{DD}	45	55	%
Rise/Fall Time (10% V_{DD} to 90% V_{DD} Maximum Loaded)	Tr/Tf	8≤F_{OUT}≤26MHz	—	10	nS
		26<F_{OUT}≤45MHz	—	8	
		45<F_{OUT}≤80MHz	—	5	
Output Voltage-"L"	V_{OL}	I_{OL}=8mA	—	10% V_{DD}	Volt
Output Voltage-"H"	V_{OH}	I_{OH}=−8mA	90% V_{DD}	—	
Output Load	CL	CMOS	—	15	pF
Input Voltage Range	V_{IN}		0	V_{DD}	Volt
Input Voltage-"L"	V_{IL}		—	30% V_{DD}	Volt
Input Voltage-"H"	V_{IH}		70% V_{DD}	—	
Output Disable Time	—		—	150	nS
Output Enable Time	—	8≤F_{OUT}≤32MHz	—	5	mS
		32<F_{OUT}≤50MHz	—	150	nS
		50<F_{OUT}≤80MHz	—	5	mS
Start-up Time	ST	@Minimum operating Voltage to be 0sec.	—	10	mS

Note: Please contact us for inquires about extended operating temperature range, available frequencies and other conditions.
All electrical characteristics are defined at the maximum load and operating temperature range.

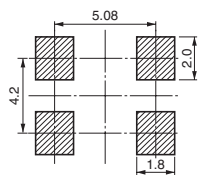
Dimensions

(Unit : mm)



Recommended Land Pattern

(Unit : mm)



Note: A capacitor of value 0.01µF between V_{DD} and GND is recommended.

AVX